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The Sustained Primary Program for Bilingual Students is an ESEA/Title III program which emphasizes understanding and appreciating the Spanish, Mexican, Anglo heritage of the Mesilia Valley and southwestern New Mexico, discovering the structure of the language, recognizing how learning occurs, identifying the methodology and strategy needed to create the best learning climate, and exploring ways of expanding the learning environment into the home and community. This 12-month program includes 200 instructional days and short vacation periods. Teachers and pupils remain together from kindergarten through grade 3, and advancement is continuous and nongraded. The language experience approach to reading is incorporated in the culturally centered curriculum. Bilingual instructional aides assist the master teachers, and parent participation is encouraged. Statistical data for the project's first year (1966-67), comparing program children with control groups on the California Test of Mental Maturity, the Metropolitan Reading Readiness Test, and other measures, indicate that dual language instruction enhanced school achievement. Tables and references are included. (CM)

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SUSTAINED PRIMARY PROGRAM FOR BILINGUAL STUDENTS

Las Cruces School District No. 2

Las Cruces, New Mexico

RE 001 850

Films and Illustrated Lectures

The problem of bilingual instruction has long typified the educational needs of the Southwest. In Las Cruces, New Mexico, many attempts have been made to solve the problem. They have included pre-first classes (begun in 1929), junior first, high first, summer language programs, second summer language enrichment, and head start. Programs were commendable but more remained

to be done, for despite all efforts children from Spanish speaking backgrounds consistantly lagged behind native English speaking children in readiness, reading and total achievement.

A recent summary of test results from eleven schools compiled in 1963, 1964 and 1965 revealed that, at the readiness level the percentage of children scoring <u>below</u> the 25th percentile on the Metropolitan Reading Readiness Test were: from English speaking backgrounds .02 per cent; from Spanish speaking backgrounds 30.7 percent; in the area of reading and total achievement, children from schools with a predominant Spanish-Mexican enrollment scored on the average one year and six months below students from schools with a predominant anglo enrollment.

METROPOLITAN READING READINESS TEST FORM R SCORES

OF FIRST GRADE STUDENTS BY SCHOOL ENROLLMENT TYPE

Type of Pupil Enrollment	Pupils Tested	Per cent of Pupils Scoring Below Percentile 25
Predominantly Anglo	210	.023
Predominantly Spanish	368	30.7

IOWA TEST RESULTS 1963 - 1964 - 1965

IN LAS CRUCES SCHOOL DISTRICT NO. 2

BY ETHNIC GROUP CLASSIFICATION

		Total Achievement		Total Reading Achievement	
Year	Grade	Anglo	Spanish	Anglo	Spanish
1963	3	3.50	2.86	3.62	2.84
1964	3	3.71	2.83	3.70	2.72
1965	3	3.36	2.61	3.37	2.62
1963	4	4.81	3.84	4.89	3.69
1964	4	4.80	3.64	4.94	3.59
1965	4	4.32	3.77	4.40	3.57
1963	5	6.14	4.75	6.28	4.66
1964	5	6.21	4.72	6.29	4.56
1965	5	5.65	4.42	5.70	4.30
1963	6	7.13	5.92	7.11	5.86
1964	6	7.39	5.29	7.46	5.25
1965	6	6.89	5.57	6.99	5.50

Results of the achievement tests provided reliable objective information for comparative analysis. Other data, less objective but equally reliable was teacher evaluation of pupil attitude and behavior. Similar evaluative reports related to problems of educating the bilingual child were found in the literature and served to confirm teacher judgment.

Angel's (1) study indicated that one effect of bilingualism for the Mexican-American child was social maladjustment.

Frustration and discouragement were apparent when children were forced to learn in a weak language, according to MacNamara (6) and Manuel (5). Attempts to understand an unfamiliar subject in an unfamiliar tongue was a difficult process for adults even when motivation was present; for children it was utter confusion. Unable to cope with prolonged bombardment of unidentified stimuli, childrens responses ranged from general disinterest to more overt action and included stuttering, agressive acts directed toward other children, passive hostility directed toward adults (withdrawal, refusal to work, generally non-cooperative), loss of self-confidence (fearful of trying), defensive behavior (headache, stomach ache), et cetera.

In Education Across Cultures, Zintz (9) noted that children required to adjust to a different culture, with a different language, when verbal expression was lacking, experienced extreme frustration which blocked thinking skills. Under such stress cognitive skills appeared to be lacking. Communication also suffered; children appeared neither monolingual or bilingual, but rather nonlingual.

Gaarder (4) considered emotional and intellectual problems to be closely related to language. When bilingualism was viewed as a liability, confidence and pride were destroyed and the individual rejected self, school, parents and society. When the learner felt his language and culture were accepted he developed feelings of positive self-worth which enabled him to cope with cognitive tasks.

Early in the 1960's concerns for bilingual education began to receive national attention. In 1965 and 1966 the report of the NCTE Task Force on Teaching English To The Disadvantaged (7) and the NEA Tucson Survey of the Teaching Of Spanish To The Spanish Speaking (8) focused on the bilingual education problem.

As a result of this growing awareness schools across the nation began seeking ways to make the Invisible Minority (8) visible. Support was provided through the Elementary and Secondary Education Act (1965) whereby solutions to the problem were sought. Innovative and exemplary studies under Title III offered opportunities to conduct educational research relevant to local needs.

The Sustained Primary Program for Bilingual Students, of the Las Cruces, New Mexico, Public Schools, Title III ESEA, recognized the problem of undifferentiated cultural and linguistic factors related to academic achievement and presented an experimental design for bilingual education beginning with kindergarten and advancing through grade three. (A research study began July 1967 and will conclude June 1971.)

The experimental setting for this project, currently in operation, represents the best we know about learning environments. Emphasis is upon understanding and appreciating the Spanish, Mexican, Anglo heritage of the Mesilla Valley and Southwestern, New Mexico, discovering the structure of language, recognizing how learning occurs, identifying

The methodology and strategy needed to create the best learning climate and exploring ways of expanding the learning environment into the home and community.

THEORETICAL POSITION

The basic philosophy of the design is contained in the following position statements:

If school curriculum utilizes the cultural values and language of ethnic groups in the community it follows that greater appreciation and understanding will promote positive feelings of self-worth leading to meaningful bicultural interaction.

If the learner experiences happy positive feelings, he will feel free to explore and to question his environment thus facilitating maximum perceptual and conceptual growth.

If the learner's language patterns and cultural values are fully accepted feelings of positive self-awareness and self-confidence will facilitate healthy interaction and involvement resulting in optimum measurable achievement.

If the learner becomes equally competent in the skills of the English and Spanish language he will possess the verbal and interpretative tools for meaningful bicultural interaction.

If school administrators and teachers value the involvement of parents in the curricular experiences of their children and parent participation is actively maintained, home-school relations will reflect mutual responsible concerns for education.

COMPONENTS of the project include seven major features. Each component is presented with accepted rationale.

A Sustained Primary Program for Bilingual Students provides continuous learning experiences through a twelve months program with two hundred instructional days and short vacation periods. The calendar is approved by the parents. Teachers and pupils remain together kindergarten through grade three. Advancement is continuous and non-graded.

Extended Teacher Contracts include two hundred days of instruction and twenty-five days of in-service. Teachers receive college credit for in-service training under the direction of public school administrators. Emphasis is upon curriculum preparation, teaching methods and evaluations.

A Culturally Centered Curriculum implements sound learning theory. First of all the value system of the learner is recognized. This is done by identifying and accepting cultural values of the historical setting and linguistic contributions of the present personal setting. Culture is explored as content and content developed through the English and Spanish language. Valuing and utilizing the pupils cultural heritage creates a climate for happiness and confidence. Valuing and utilizing the pupils linguistic patterns promotes early and meaningful communication. Thus feelings are not in conflict with language or culture and the child can experience successful encounter in the assimilation of cognitive data.

The Methodology employed provides a description of how learning occurs and identifies the climate in which learning is most readily facilitated. It is a description of the teaching strategy and the dynamics of the learner's response. It describes inquiry and discovery techniques which will lead to concept formation.

Within the Sustained Primary Program for bilingual pupils, prime consideration is accorded the necessity for providing situations and materials whereby conceptual proficiency and self-esteem are achieved simultaneously.

Through differentiated instruction pupils are encouraged to become self-selective, self-directed, self-disciplined and self-evaluative. The emphasis is upon awareness of self, awareness of others and personal competence.

The curriculum guide establishes a broad conceptual framework. The statement of concept provides a goal or understanding the child is expected to reach through inquiry and discovery.

Content areas determine the scope and sequence of information appropriate to instructional level and subject area.

Activities and resources support concepts presented. Finally, evaluative guidelines provide measures of perceptual, conceptual and attitudinal growth.

The why and the how are set forth in this culturally centered language arts guide which is the vehicle for the experimental instructional program of four schools, kindergarten through third grade.

The Experiential Language Arts Instructional Program represents the heart of this study. Communication is controlled by the individual's personal values. Attitudinal values are like a magnetic force which selects, attracts, repells and arranges stimuli into fields of action. The childs attitudinal values are inexorably bound to his culture, language, and feelings, and serve to shape his conceptualizations. This attitudinal force operates continually and selectively in the learning process. Language is the vehicle for concept formation. Language forms the bridge of understanding for it cannot be divorced from emotion or intellect. Language achieves its fullest meaning when the interaction of experience makes it possible for a child to express his conceptualization.

Valuing creative communication individualizes learning, for children speak, write, read, spell and translate personally meaningful patterns of language. Creative communication accompanies and promotes creative behavior and responsible decision making thus generating the desirable flexibility required for healthy adjustments in a changing society.

Experimental English-Spanish Instruction occurs in two elementary schools. Sixty kindergarten children and sixty first grade children began the project in 1966-67 and will advance through grade three. Children enrolled in the K-3 classes learn to listen, speak, read and write in English and Spanish. Instruction is aimed toward linguistic fluency and comprehension in both languages. Learning in two languages

is not seen as an end in itself, but as a process for bettering educational and social goals.

Experimental English Instruction occurs in two elementary schools. Sixty kindergarten children and sixty first grade children began the project in 1966-67 and will advance through grade three. Children enrolled in the K-3 classes are instructed in English only. Comprehension, however, is a basic necessity and a bilingual aide is present to provide language reinforcement when it is needed.

A Controlled Basal Reader Program describes language arts instruction for first, second and third grade children in the four elementary schools who are not enrolled in the K-3 Program. These pupils comprise the control group.

Language Patterning is considered an important part of each child's aural-oral experience in both experimental groups. Vocabulary is carefully selected. Language skills are strengthen through the use of tape recorder, listening center, and individualized programmed activities. Patterns are selected which help children express positive self concepts in Spanish and English.

Encoding and Decoding Skills are recognized as part of the learning process. Every individual in some manner accepts, rejects, assimilates, integrates and responds to stimuli in a manner appropriate to his total organismic structure. The learners response to language is observed by

the perceptual motor skills he demonstrates, by the linguistic and conceptual level at which he operates, by the neuro-psycho-shysio make-up he displays and by the personal value system he employs.

Language is a learned process based on the child's sensory perception and organization of all auditory and visual stimuli.

Language is also a social experience developed in relation to self and others and provides a media for receiving, reacting and interacting with the environment.

Decoding means breaking the visual code and assigning meaning to language symbols. It is the basic skill essential for success in reading. Decoding is more than phonics instruction. It is a way of exploring the structure of language and requires the selection of appropriate strategies for categorizing perceptual and conceptual stimuli into temporal spatial patterns.

Breaking the visual code (3), valuable as it is .....for children of low-socio economic status and those predisposed to reading failure ....., must be preceeded and accompanied by meaning laden patterns of language.

The Language Experience Approach to Reading becomes then the basic technique for reading instruction in each experimental group. Through many experiences, perceptual, conceptual and attitudinal constructs are continually formulated which provide motivation for meaningful communication.

Individualized Reading helps children develop a positive self concept. There is personal satisfaction in selecting, pacing, sharing,

questioning, and recognizing reading skills.

The Bilingual Instructional Aide is an important link between home and school for she represents the same ethnic background; values the same customs and traditions, and speaks the same language as the children. She is able to reinforce learning concepts in English or Spanish so that every child fully comprehends. The aide acts as interpreter and translator for parents or visitors whenever the need is apparent. She assists with language patterning activities, operates listening centers and audio-visual equipment. After the teacher has diagnosed learning needs and selected appropriate techniques and materials, the aide provides tutorial assistance for individuals and small groups. Aides render invaluable service from the many housekeeping chores they perform to the public relations role they play in the community.*

With an aide the master teacher functions at a truly professional level. She is able to diagnose learning problems and prescribe appropriate assistance. There is time for planning, individualization and for creative productivity.

Parent Participation stresses direct envolvement of parents with the school in the establishment of educational goals. Parents and teachers working together learn mutual respect and responsible participation.

Continuing efforts involve parents in parent-teacher conferences,

* In-service workshops are a regular part of their job responsibility. Career advancement is offered under another phase of the Migrant Program.

Teacher-class demonstrations, home visitations, instructional workshops where parents construct teaching materials requested by the teacher, arts and crafts workshops where parents learn to make decorative and inexpensive articles for their homes, and parent study groups where interest and/or problems needs related to home and school are discussed. As a result of the special studies, parents and teachers have experienced increased personal sensitivity and insight into their own feelings as well as increased understanding of their roles as facilitators of learning. (Activities are publicized through "El Mirasol" an English/Spanish newsletter for parents.)

The Human Development Program (2) facilitates favorable personality growth and development. It was chosen to compliment the K-3 Program to advance positive feelings of self-worth. Teachers and parents learn to strengthen and enrich the learning experiences of children through increased awareness of, and sensitivity to school, home and community life as it affects pupil attitude and performance.

The Human Development Program promotes positive awareness of self and others, develops and evaluates social interaction and helps individuals recognize and accept feelings of mastery and success.

CALL FOR ACTION

These various components comprise the learning environment. The stage is set! The mood is changing - experimental - positive - exciting - frustrating - expectant - determined - warm - intense - and purposeful!

What do we expect to learn?

Will children involved in the experimental culturally centered language arts instructional programs achieve at a significantly higher level than children from similar backgrounds at similar grade level who are involved in a traditional basal reader instructional program?

Will children involved in the experimental English/Spanish instructional program achieve as well as children in an experimental English program and better than a like group of children in a basal reader instructional program?

Will the mental abilities of children from Spanish speaking backgrounds be increased by actualizing positive self concepts related to language and culture through curricular learning experiences?

Will pupils receiving two hundred (200) days of instruction during a twelve months period with frequent short vacations not exceeding three weeks, experience continuous learning advancement at a significantly higher level than pupils receiving instruction for one hundred eighty (180) days during a nine months period with three months of vacation time?

Will projective measures of pupil attitude and adjustment (affective learning) correlate positively with standarized measures of pupil achievement (cognitive learning)?

Will parent attitude and degree of involvement correlate positively with pupil attitude and pupil achievement?

RESEARCH DESIGN:

Pre and post measures of mental ability, readiness for learning, academic achievement, pupil attitude, parent attitude and degree of involvement will be assessed each year of the project.

The Parent Attitude Toward Education Rating Scale will indicate any changes in attitude related to the schools instructional program, home-school relationships, value of education for themselves and their children, aspirations for their children, extended school year, dual language instruction and personal educational experiences.

Evaluation instruments include: California Test of Mental Maturity, Kindergarten Evaluation of Learning Potential, Metropolitan Reading Readiness, Metropolitan Achievement Test, Parent Attitude Toward Education, Draw-a-Person and Pupil Adjustment Scale.

Statistical Data for the first year (1966-67) of the project is in the process of being analyzed. This portion of the report presents some implications and possible trends in bilingual instruction. It is not meant to represent the final data. Whether these results are significant, is too early to say.

Results of the California Test of Mental Maturity administered to first grade students in the fall of 1967 and again in the spring of 1968 indicated a significant difference between the pre-post language I. Q. means and between the pre-post non-language I. Q. means for each of the instructional programs at the .01 level. (Table I)

CALIFORNIA TEST OF MENTAL MATURITY

Pre - Post Results Comparison

Significance of Difference Between Means

Table I

	Language I.Q.				Non Language I.Q.			
	F. 1967	S. 1968	T	Sig.	F. 1967	S. 1968	T	Sig.
Control	86.0	97.0	17.19	.01	89.95	100.70	16.29	.01
Exp. English	89.9	98.10	6.56	.01	90.05	101.15	10.99	.01
Exp. Spanish English	93.45	100.55	5.87	.01	85.95	103.95	18.56	.01

* mean scores

It appeared that for bilingual students, intelligence as measured by the California Test of Mental Maturity is favorably affected by school instruction.

For first grade students the language I. Q. and non-language I. Q. comparison of the significance of difference between means scores of fall (1967) and spring (1968) tests as measured by the California Test of Mental Maturity (Table II) indicated there was a significant difference between the language and non-language I. Q. of the control group in the fall and the spring testing. There was no significant difference between the language and non-language I. Q. of the experimental English group.

There was no significant difference between language and non-language I. Q. of the experimental Spanish/English group in the fall testing, but a significant difference was found in the spring testing.

CALIFORNIA TEST OF MENTAL MATURITY

Language I. Q. - Non Language I. Q. Comparison

Significance of Difference Between Means

Table II

	Fall 1967				Spring 1968			
	Lang.	Non Lang.	T	Sig.	Lang.	Non Lang.	T	Sig.
Control	86.0	89.95	3.04	.01	97.0	100.70	3.14	.01
Exp. English	89.9	90.05	.07		98.10	101.15	1.47	
Exp. Spanish English	93.45	85.95	1.12		100.55	103.95	1.67	.01
Total	89.50	89.90	.41		98.10	98.50	.41	

We may assume that the language development of the children in the control group was retarded in comparison to their non-language development and that the experimental Spanish/English group developed non-language skills which were apparently lacking at the time of initial testing.

CALIFORNIA TEST OF MENTAL MATURITY

Program Comparisons of Results

Significance of Difference Between Means

Table III

	Con.	Exp. Eng.	T	Sig.	Con.	Exp. Eng/Sp	T	Sig.	Exp. Eng.	Exp. Eng/Sp	T	Sig.
Fall 67 Lang.	86.0	89.9	1.34		86.0	93.45	2.59	.01	89.9	93.45	.97	
Fall 67 Non Lang.	89.95	90.05	.03		89.95	85.95	1.50		90.05	85.95	1.31	
Spring '68 Lang.	97.0	98.10	.43		97.0	100.55	2.13	.05	98.10	100.55	.77	
Spring '68 Non Lang.	100.70	101.15	.02		100.70	103.95	1.34		101.15	103.95	.91	

The comparison of experimental programs as measured by the California Test of Mental Maturity (Table III) indicated by the significance of difference between means there was no significant difference between the control and experimental English groups, no significant difference was found between the experimental English group and experimental Spanish/English group but there was significant difference between the control and experimental Spanish/English group on language I.Q.

We can assume that the population in the control group does differ from the population in the experimental Spanish/English group in language competency.

Program Comparison

METROPOLITAN ACHIEVEMENT TEST

Significance of Difference Between Means

Table IV

	Con.	Exp. Eng.	T	Sig	Con.	Exp. Eng/Sp	T	Sig	Exp. Eng.	Exp. Eng/Sp	T	Sig
Word Know-ledge	20.58	21.38	.50		20.58	20.98	.58		21.38	20.98	.22	
Word Discri-mination	20.42	20.18	.17		20.42	22.98	1.72	.10	20.18	22.98	1.71	.10
Reading	21.45	22.15	.38		21.45	22.80	.69		22.15	22.80	.31	
Arithmetic	46.45	48.80	.94		46.45	50.78	1.96	.05	48.80	50.78	.69	

A survey of Metropolitan Achievement Test (Table IV) scores administered in the fall of 1968 (In September 1968, second grade groups were administered the first grade test.) indicated the significance of difference between means in word knowledge, word discrimination, reading and arithmetic.

Results indicated that the experimental Spanish/English group differed significantly from the control group in word discrimination (.10) and arithmetic achievement (.05), and from the experimental English group in word discrimination (.10) as measured by Metropolitan Achievement Test.

Two implications seem justified: dual language instruction was not detrimental to achievement in school as measured by Metropolitan Achievement Test and instruction in English and Spanish enhanced school achievement.

CONCLUSIONS:

While conclusive statements at the end of the first year would be premature, it is appropriate, because of intensified educational concerns for bilingual education, to provide a description of the project and to evaluate and report the progress of the study. Other reports will be forthcoming at a later date.

Results of 1966-67 studies present the following findings:

Intelligence: The mental abilities of children in the experimental and control groups were increased by school experiences as measured by the California Test of Mental Maturity.

Instruction: Dual language instruction was not detrimental to academic achievement as measured by the Metropolitan Achievement Test. Dual language instruction enhanced school achievement.

Achievement: Children who attended two hundred days of school and received continuous educational learning experiences in the experimental program achieved more than children in the traditional one hundred eighty days program, and more than children in the traditional one hundred eighty days program plus forty half days of summer language program, as measured by the Metropolitan Achievement Test.

LOOKING AHEAD

Measures of pupil self-concept and parent attitude toward education as they relate to pupil achievement will be reported in a later article. Suffice to say that we have never, at any time, lost sight of the individual and how he feels.

At appropriate intervals progress reports will be made available to interested educators in the form of summaries, demonstrations, lectures, slides, movie, publications, workshops and conferences. The complete report will be available in 1971.

As the Sustained Primary Program enters the third year of the research study, Las Cruces School administrators and teachers are already adjusting to curriculum changes growing out of the initial phase of the study. A new proposal under Title VII will study the effectiveness of team teaching using educational specialists with paraprofessionals and parent volunteers in a dual language, culture oriented, instructional program.

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